

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Patrizio Vinciarelli Art Unit : Unknown  
Serial No. : Examiner : Unknown  
Filed : Herewith  
Title : LOW-LOSS TRANSFORMER-COUPLED GATE DRIVER

**MAIL STOP PATENT APPLICATION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## **INFORMATION DISCLOSURE STATEMENT**

Applicant submits the references listed on the attached form PTO-1449.

Under 35 USC §120, this application relies on the earlier filing date of application serial number 10/443,573, filed on May 22, 2003. The cited references were submitted to and/or cited by the Office in the prior application and, therefore, are not provided in this application.

This statement is being filed with the application. Please apply any charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 00614-136003.

Respectfully submitted,



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March 29, 2004

Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 00614-136003	Application No.
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Patrizio Vinciarelli		
		Filing Date Herewith	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	4,648,017	03/03/87	Nerone			
	AB	4,841,220	06/20/89	Tabisz et al.			
	AC	4,860,184	08/22/89	Tabisz et al.			
	AD	4,931,716	06/05/90	Jovanovic et al.			
	AE	4,855,888	08/08/89	Henze et al.			
	AF	5,615,093	03/25/97	Nalbant			
	AG	4,533,986	08/06/85	Jones			
	AH	4,853,832	08/01/89	Stuart			
	AI	5,999,417	12/07/99	Schlecht			
	AJ	6,222,742	04/24/01	Schlecht			
	AK	5,448,467	09/05/95	Ferreira			
	AL	5,179,512	01/12/93	Fisher et al.			
	AM	5,514,921	05/07/96	Steigerwald			
	AN	6,330,169	12/11/01	Mullett et al.			
	AO	5,991,171	11/23/99	Cheng			
	AP	6,381,150	04/30/02	Telefus			
	AQ	3,596,165	07/27/71	Andrews			
	AR	5,594,635	01/14/97	Gegner			
	AS	5,491,388	02/13/96	Nobuyuki et al.			
	AT	4,443,840	04/17/84	Geissler et al.			
	AU	5,615,093	03/25/97	Nalbant			
	AV	4,533,986	08/06/85	Jones			

Foreign Patent Documents or Published Foreign Patent Applications							
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes      No
	AW						
	AX						

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							Yes
	AY						
	AZ						
	AAA						

Other Documents (include Author, Title, Date, and Place of Publication)		
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	ABB	Harriman, Intel Corp., "New Control Method Boosts Multiphase Bandwidth," Power Electronics Technology, January 2003, pp. 36-45.
	ACC	Morrison et al., "A New Modulation Strategy for a Buck-Boost Input AC/DC Converter," IEEE Transactions on Power Electronics, Vol. 16, No. 1, pp. 34-45, January 2001.
	ADD	Tabisz et al., "Present and Future of Distributed Power Systems," APEC '92 Conference Proceedings, 1992, pp. 11-18.
	AEE	Mweene et al., "A High-Efficiency 1.5 kW, 390-50V Half-Bridge Converter Operated at 100% Duty Ratio," APEC '92 Conference Proceedings, 1992, pp. 723-730.
	AFF	Choi et al., "Dynamics and Control of DC-to-DC Converters Driving Other Converters Downstream," IEEE Transactions on Circuits and Systems – I: Fundamental Theory and Applications, October 1999, pp. 1240-1248
	AGG	Lee et al., "Topologies and Design Considerations for Distributed Power Systems Applications," Proceedings of the IEEE, June 2001, pp. 939-950.
	AHH	Steigerwald, "A Comparison of Half-Bridge Resonant Converter Topologies," IEEE Transactions on Power Electronics, Vol. 2, No. 2, April, 1988.
	AII	Baker, "High Frequency Power Conversion with FET-Controlled Resonant Charge Transfer," PCI Proceedings, April 1983.
	AJJ	Divan, "Design Considerations for Very High Frequency Resonant Mode DC/DC Converters," IEEE Transactions on Power Electronics, Vol. PE-2, No. 1, January, 1987.
	AKK	Bo Yang et al., "LLC Resonant Converter for Front End DC-DC Conversion," CPES Seminar 2001, Blacksburg, VA, April 23, 2001, pp. 44-48.
	ALL	Bo Yang et al., "Low Q Characteristic of Series Resonant Converter and Its Application," CPES Seminar 2001, Blacksburg, VA, April 23, 2001, pp. 170-173.
	AMM	Palz, "Stromversorgung von Satelliten – Wanderfeldröhren hoher Leistung" ("Power Supply for Satellites – High Capacity Traveling-Wave Tubes"), Siemens Zeitschrift, Vol. 48, 1974, pp. 840-846. (with English Translation)
	ANN	Data sheet, "Preliminary Tech Spec, Narrow Input, Isolated DC/DC Bus Converter," SynQor Document No. 005-2BQ512J, Rev. 7, August, 2002, pp. 1-7.
	AOO	Erickson and Maksimovic, "Fundamentals of Power Electronics," 2 <sup>nd</sup> Edition, Kluwer Academic Publishers, 2001.
	APP	Hua et al., "Novel Zero-Voltage Transition PWM Converters," IEEE Transactions on Power Electronics, Vol. 9, No. 2, March, 1994, p. 605.
	AQQ	Vinciarelli, Buck-Boost DC-DC Switching Power Conversion," U.S. Patent Application No. 10/214,859, filed August 8, 2002. [00614-129001]

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<b>Other Documents (include Author, Title, Date, and Place of Publication)</b>				
Examiner Initial	Desig. ID	Document		
	ARR	Colson, "Intel Platform Solutions," Issue 23, September 3, 1999, pp. 1, 20-21.		
	ASS	Reynolds, "Intel Development Forum Highlights: Fall 1999," published by Gartner, Dataquest, November 30, 1999.		
	ATT	Strassberg, "Tiny Titans: Choose 'Em and Use 'Em With Care," EDN Magazine, May 2, 2002, pp. 41-42, 44, 46 & 48.		
	AUU	Morrison, "Distributed Power Moves to Intermediate Voltage Bus", Electronic Design Magazine, September 16, 2002, pp. 55, 58, 60 & 62.		
	AVV	Yao et al., "A Novel Resonant Gate Driver for High Frequency Synchronous Buck converters," IEEE Transactions on Power Electronics, Vol. 17, No. 2, March 2002, pp. 180-186.		
	AWW	Stanford, "New Processors Will Require New Powering Technologies," Power Electronics Technology Magazine, February 2002, pp. 32-42.		
	AXX	Balogh, "Distributing On-Card Power – Choosing the Right Board-Level Architecture for a Range of Power Needs", Texas Instruments, High-Performance Analog, Apec '03, Miami, FL, pp. 1-24.		
	AYY	Ren et al., "A Novel Simple and High Efficiency 'DC/DC Transformer'," Center for Power Electronics Systems, CPES Seminar 2002, Blacksburg, VA, April 14, 2002, pp. 173-177.		
	AZZ	Weinberg et al., "A New Zero Voltage and Zero Current Power-Switching Technique," IEEE Transactions on Power Electronics, Vol. 7, No. 4, October 1992, pp. 655-665.		
	AAAA	Miller, "The Use of Resonant Circuits in Power Conditioning Equipment," PCSC '71 Record, 1971, pp. 94-100.		
	ABBB	Schwarz, "A Method of Resonant Current Pulse Modulation for Power Converters," IEEE Transactions on Industrial Electronics and Control Instrumentation, Vol. 4, No. 4, October 1989, pp. 209-221.		
	ACCC	Ray et al., "A Cascaded Schwarz Converter for High Frequency Power Distribution," IEEE Transactions on Power Electronics, Vol. 4, No. 4, October 1989, pp. 478-485.		
	ADDD	Schmidtner, "A New High Frequency Resonant Converter Topology," HFPC, May 1988 Proceedings, pp. 390-403.		
	AAAA	Batarseh, "Resonant Converter Topologies with Three and Four Energy Storage Elements," IEEE Transactions on Power Electronics, Vol. 9, No. 1, January 1994, pp. 64-73.		
	FFFF	Ye et al., "Investigation of Topology Candidates for 48V VRM," 2002 APEC Conference.		
	AGGG	Alou et al., "Buck + Half Bridge (d=50%) Topology Applied to Very Low Voltage Converters," Applied Power Electronics Conference and Exposition, APEC 2001, Vol. 2, pp. 715-721.		
	AHHH	Ren et al., "Two-Stage 48V Power Pod Exploration for 64-Bit Microprocessor," Applied Power Electronics Conference and Exposition, 2003, Vol. 1.		
	AIII	"SynQor's Bus Converter delivers 240 Watts in Quarter-brick," SynQor Press Release, August 2, 2002.		
	AJJJ	Severns and Bloom, "Modern DC-to-DC Switchmode Power Conversion Circuits, 'DC Transformers'" ISBN 0-442-21396-4, pp. 78-111, 1985.		
	AKKK	Severns et al., "Modern DC-to-DC Switchmode Power Converter Circuits, 'Buck-Derived Circuits,'" ISBN 0-442-21396-4, pp. 114-117, 1985.		
	ALLL	Severns et al., "Modern DC-to-DC Switchmode Power Converter Circuits, 'Boost-Derived Circuits,'" ISBN 0-442-21396-4, pp. 136-139, 1985.		

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	AMMM	Morrison, "Distributed Power: Novel Architecture Yields New Dc-Dc Building Blocks", Electronic Design, Vol. 51, No. 9, pp. 40-42, April 28, 2003.
	ANNN	Stephens, Inc. Investment Bankers, Industry Notes, "Newly Released Integrated Dc-Dc Converter Products Signal Start of a Trend", May 8, 2003.
	AOOO	Stephens, Inc. Investment Bankers, Research Bulletin, "Vicor Unveils "Disruptive" Technology", May 6, 2003.
	APPP	<a href="http://www.elecdesign.com">www.elecdesign.com</a> Electronic Design, "More Compact Than The Intermediate Voltage Bus", April 28, 2003.
	AQQQ	<a href="http://www.elecdesign.com">www.elecdesign.com</a> Electronic Design, "V.1 Chips May Challenge VRMs", April 28, 2003.
	ARRR	<a href="http://www.planetEE.com">www.planetEE.com</a> Electronic Design, "Mixing And Matching FPA Building Blocks", April 28, 2003.

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